

ABSTRACT

Disclosed herein are a torsion beam type suspension and a forming method of a torsion beam. In the torsion beam type suspension comprising a pair of left and right trailing arms connected to each other through a torsion beam, front ends of the trailing arms being used to mount a vehicle body by using joints, the torsion beam is obtained by forming an overall length of a pipe having a certain wall thickness by using a pressure forming process. In this case, end sections defined at both end portions of the torsion beam have a cross-sectional shape of a hollow oval, a center section defined at a center portion of the torsion beam has a cross-sectional shape of a hollow open loop, and middle sections defined between the center portion and both the end portions of the torsion beam have a cross-sectional shape of a hollow open loop. The loop of the middle sections defines an inner space larger than that defined by the loop of the center section. Further, since the torsion beam can be easily formed by adopting a hydro-forming process, it is possible to achieve high twisting rigidity, bending rigidity, and durability without requiring a torsion bar and reinforcement, which must be inevitably assembled to a conventional torsion beam axle, resulting in a reduction of the number of constitutive elements and the overall weight.